

REMARKS/ARGUMENTS

Applicants thank the Examiner for the thorough consideration given the present application. Claims 1-30 are pending in the present application. Claims 1, 2, 5, 6, and 9-16 have been amended. Claims 17-30 are new. Claims 1-17 and 24 are independent claims.

Allowable Subject Matter

It is gratefully acknowledged that the Examiner considers the subject matter of claims 3, 4, 7, 8, 11, 12, 15, and 16 as being allowable if rewritten to overcome the double patenting rejection in the Office Action, or if a Terminal Disclaimer is filed.

Claim for Priority

It is gratefully acknowledged that the Examiner has recognized Applicants' claim for foreign priority. In view of the fact that the Applicants' claim for foreign priority has been perfected, no additional action is required from the Applicants at this time.

Drawings

In the Office Action, the Examiner objected to the drawings because Figs. 19-25 should be designated by a legend indicating only that which is old is illustrated. Corrected drawing sheets are attached herewith in which the label "CONVENTIONAL ART" has been added to Figs. 19-25. Accordingly, Applicants respectfully request the Examiner to withdraw this objection.

Acknowledgment of Information Disclosure Statement

The Examiner has acknowledged the Information Disclosure Statements (IDSs) filed on April 27, 2000, July 27, 2000, and December 20, 2002. Initialed copies of the respective PTO-1449s have been received from the Examiner. Accordingly, no further action is necessary at this time.

Specification

In the Office Action, the Examiner objected to the specification because the Title is not descriptive. In view of the Examiner's recommendation, the Title has been changed to "BIT ASSIGNMENT IN A COMMUNICATION SYSTEM AND COMMUNICATION METHOD." Thus, the Examiner is respectfully requested to withdraw this rejection.

Double Patenting Rejection

Claims 3, 4, 7, 8, 11, 12, 15, and 16 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 2, 4, and 8 of U.S. Patent No. 6,747,992 to Matsumoto (hereinafter Matsumoto) in view of Applicants' admitted prior art (hereinafter APA). Applicants do not concede that this rejection is proper. However, in an effort to expedite prosecution, Applicants have filed a Terminal Disclaimer in compliance with 37 C.F.R. § 1.321(c) in connection with the commonly owned Matsumoto patent. Accordingly, Applicants respectfully request the Examiner to withdraw this rejection.

Rejections Under 35 U.S.C. § 102

Claims 1, 2, 5, 6, 9, 10, 13, and 14 stand rejected under 35 U.S.C. § 102(a) as being anticipated by the APA as described in Figs. 19-25 and pages 1-13 of the specification. This rejection, insofar as it pertains to the presently pending claims, is respectfully traversed.

In the APA cited by the Examiner, data may be transmitted using a hyperframe whose periods are divided into a far-end cross talk (FEXT) section and a near-end cross talk (NEXT) section. The APA further discloses that the FEXT section is

associated with a bit map A, while the NEXT section is associated with a bit map B. See page 11: lines 3-10 of the specification.

The APA discloses both a single bit map mode of (i.e., only bit map A is used) and a double bit map mode (i.e., both bit map A and bit map B are used) for transmitting discrete multi-tone (DMT) symbols.

In the single bit map mode, the APA discloses that that the data (bits) of some DMT symbols may be assigned to different periods in a hyperframe. In other words, some of the bits of a DMT symbol are assigned to the bit map A corresponding to the FEXT section of one period, while the remaining bits of the symbol are assigned to the bit map A of the FEXT section in a subsequent period. This is due to the number of bits assigned to the bit map A, and because each bit map A in the hyperframe is filled as much as possible with bits of DMT symbols. The APA also discloses that splitting the symbol bits among different periods causes a higher delay time. See page 13: lines 12-16 in the specification.

In a dual bit map mode of the APA, the same problem occurs, i.e., the data in a DMT symbol may be split up into separate periods for transmission. This is caused by the number of bits the APA assigns to bit maps A and B, and because these bit maps

are filled with as much data as possible. This causes the APA's dual bit map to experience higher delay times in the , similar to the single bit map mode. See page 13: lines 16-21.

Accordingly, the APA fails to disclose assigning bits in such a manner that the data assigned to a particular period corresponds to one or more symbols, which are transmitted during that period. Instead, in both the single and dual bit map modes of the APA, bits are assigned such that the data corresponding to a particular symbol may be assigned to two different periods.

Therefore, Applicants respectfully submit that the APA does not disclose the assignment of bits recited in independent claims 1, 2, 5, 6, 9, 10, 13, and 14. It is respectfully submitted that these claims are allowable, at least for this reason. Therefore, reconsideration and withdrawal of this rejection is respectfully requested.

New Claims

Claims 17-30 are newly filed in the present application. It is respectfully submitted that the addition of these claims does not add any new matter to the present application.

Furthermore, it is respectfully submitted that independent claims 17 and 24 each recite a combination of elements, which is neither taught nor suggested by the cited prior art. Thus, it is respectfully submitted that claims 17 and 24 are allowable and that claims 18-23 and 25-30 are allowable at least by virtue of their dependency on claims 17 and 24.

Conclusion

Since the remaining patents cited by the Examiner have not been utilized to reject the claims, but to merely show the state of the art, no comment need be made with respect thereto.

It is respectfully submitted that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request the Examiner to reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance.

Should the Examiner believe that any outstanding matters

remain in the present application, the Examiner is respectfully requested to contact Jason W. Rhodes (Reg. No. 47,305), at the telephone number of the undersigned, to conduct an interview in order to expedite prosecution in the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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